RIVER STAGES AND FLOODS

By C. R. JORDAN

Precipitation during April was heavy in central and eastern United States, with areas in Kansas and Missouri reporting more than three times the normal rainfall. Precipitation was deficient in most of the West except the central Rocky Mountain area and the northwestern corner of the country.

Widespread flooding occurred from Missouri to Texas and many long-time records were broken in the streams of this area. Streamflow was below normal throughout the Atlantic Coast States, particularly the Southeastern States, and over a broad belt extending from western Texas to Washington.

Hudson Bay and St. Lawrence Drainage.—The Red River of the North, at Grand Forks, N. Dak., was above flood stage the first 3 days of April but fell steadily during this period from the crest of 32 feet that occurred on March 30. There was also some light overflow of the St. Marys, St. Joseph, and Maumee Rivers in Ohio and Indiana that carried over from March.

Atlantic Slope Drainage.—Run-off was generally below normal from Vermont to Florida with the Lynches River at Effingham, S. C., reaching the lowest April discharge in 16 years, according to the U. S. Geological Survey. Only minor flooding of lowlands was reported at scattered points from Maine to Georgia.

East Gulf of Mexico Drainage.—The Tombigbee River was in rather severe flood at the beginning of April as reported in the March REVIEW. Stages fell steadily until the night of April 24–25 when rainfall, averaging 1.75 inches from Lock No. 3 to the mouth of the river, and a 24-hour fall of 4.14 inches at Demopolis caused a rapid rise in the lower Tombigbee River. Additional rainfall on the 28–29 produced flood stages at Lock No. 3 and Lock No. 1. Damage, principally loss of wages near Lock No. 1 and general delay in planting bottom-land crops, was not great.

Pearl River was considerably above flood stage at the beginning of the month and remained above flood stage at some stations until the 19th. Stages on the Chickasawhay and Pascagoula Rivers were comparatively high, but no flood stages were reached except at Enterprise, Miss., on one day. Since the rivers were mostly receding from the high waters of the previous month, little or no damage was reported.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.—There was moderate overflow of many of the upper Mississippi River tributaries in Missouri, Iowa, and Illinois, as shown by the table at the end of this report, and the Mississippi River exceeded flood stage from Dubuque, Iowa, to Cape Girardeau, Mo. From Dubuque to Burlington, Iowa, the stream fell below flood stage during the first 10 days of April, but from Keokuk to Cape Girardeau, Mo., numerous crests that were somewhat above flood stage were recorded at intervals throughout the month.

Ohio Basin.—Locally heavy rain over the headwaters of the Little Miami River during the night of April 23–24 resulted in a "flash" rise in the upper and middle reaches of that stream during the early morning of April 24. A crest of 17.25 feet was reached at Kings Mills, Ohio, at 9 a. m. which exceeded flood stage by 0.25 foot. No damage of any kind resulted. There was some overflow in the Wabash River in Indiana, and the lower Ohio River was above flood stage at the beginning of the month. Secondary crests, considerably lower than those reached a few weeks earlier, were reached late in March or early April; but the stream was generally below flood stage by the middle of April, except near the mouth where flood stages were carried over into May.

Lower Missouri, Lower Mississippi, and West Gulf of Mexico Drainages.—Frequent heavy rains from late March through the middle of April over a broad belt from Kansas and Missouri southward to Louisiana and Texas produced widespread flooding in this area. Run-off was above normal in the area for the past three months, and soil conditions were favorable for a very high percentage of run-off from the rainfall. Widespread damage resulted to roads, railroads, homes, and farms which, it is reported, will amount to millions of dollars.

The Missouri River exceeded flood stage from Kansas City, Mo., downstream, but maximum stages were not approached. The flood in the Gasconade River came within two feet of the crest reached by the record stage of 1897, and the Osage River at LaCygne, Kans., approached within a tenth of a foot the record stage reached by the flood of April 1944. Below the Kansas-Missouri line, the flood in the Osage River was relatively less severe.

Many of the Arkansas River tributaries in Arkansas, Missouri, Kansas, and Oklahoma reached stages near or above the highest stages ever recorded. At Seminole, Okla., a little more than 12 inches of rain fell in 9 hours on April 13. Many of the smaller streams in the vicinity of Seminole were several feet higher than ever before known, and some loss of life was reported. Record stages were exceeded on the White River, and the crest of the Arkansas River at Van Buren, Ark., exceeded slightly the stage reached in May 1943, although the peak discharge was about 200,000 c. f. s. less according to the U. S. Geological Survey.

Record-breaking stages were reached on the Ouachita, Black, Little, Sulphur, Cypress, and Red Rivers, as well as many of the smaller streams in this area. The Red River flood in Louisiana was particularly severe and caused extensive damage. The American Red Cross reports that nearly 40,000 persons were evacuated from their homes, and it is estimated that close to 1,500,000 acres of rich farming and grazing lands were flooded.

High stages prevailed in the Lower Mississippi River and the Atchafalaya River throughout the month. Crests reached in the Mississippi River below the mouth of the Red exceeded somewhat the stages reached during the flood of 1937 but were from 1 to 2 feet below record stages. The stage at New Orleans, La., was kept below 20 feet by diverting water through the Bonnet Carre Spillway.

Table I gives a comparison of the stages reached during this flood with the maximum stages previously recorded at selected stations throughout the area.